



Nevada Site Specific Advisory Board (NSSAB)

Full Board Meeting Mesquite City Council Chambers Mesquite, Nevada

4:00 p.m. – April 19, 2023

- Members Present:** Erik Anderson, Joycelyn Austin-Mabe, Lisa Blandi, John Cole, William DeWitt, William Dolan, Gary Elgort, Anthony Graham (Chair), Mark Hilton (Vice-Chair), Bruce Jabbour, Dan Peterson, Janice Six, Favil West, Eddie Williams
- Members Absent:** Kevin Trainor
- Liaisons Present:** Christine Andres (State of Nevada Division of Environmental Protection [NDEP]), Frank Carbone (Nye County Commission), John Klenke (Nye County Natural Resources and Federal Facilities Office [NRFFO]), Scott Lewis, Frank Bonesteel, and Patrick Lazenby (Nye County Emergency Management [NCEM])
- Liaisons Absent:** Richard Arnold (Consolidated Group of Tribes and Organizations [CGTO]), Jared Brackenbury (Lincoln County Commission), Phil Klevorick (Clark County)
- Department of Energy (DOE):** **Environmental Management (EM) Nevada Program:** Robert Boehlecke (Deputy Designated Federal Officer [DDFO]), Tiffany Gamero (Alternate DDFO)
National Nuclear Security Administration/Nevada Field Office (NNSA/NFO): Dr. David Bowman, John Daniels, Betty Huck
- Government Contractors:** **Navarro Research and Engineering, Inc. (Navarro):** Marilew Bartling, Grant Johnson, Glenn Puit, Ari Rosenberg, Barbara Ulmer, John Wrapp
Mission Support and Test Services, LLC (MSTS): Alissa Silvas
Atomic Museum: Morgan Gifford
- Members of the Public:** JB Bather, Marilyn Dolan, Kathy Elgort, Vivian Elgort, Steven Gantman, Dina Williamson-Erdag

Open Meeting

Chair Anthony Graham thanked everyone for their attendance and thanked the City of Mesquite for the use of the city council chambers for the meeting. Member William DeWitt moved to approve the draft agenda with the addition of an NSSAB report on the Low-Level Waste (LLW) Stakeholders Forum under the 'Other NSSAB Business' agenda item. The motion was seconded and passed unanimously.

Public Comment

There was no public comment.

Liaison Updates

Nye County Commission (*Frank Carbone*)

Liaison Frank Carbone reported that Nye County is researching solar and water consumption with solar, especially in Basin 162 and some basins in Amargosa. He will be providing additional information during future NSSAB meetings.

NCEM (*Scott Lewis*)

Liaison Scott Lewis stated that NCEM participated in the Nevada Preparedness Summit last month held at the University of Nevada, Reno. He and Patrick Lazenby participated in a full-scale exercise that included presentations that was recently held at the Nevada National Security Site (NNSS). On behalf of Nye County, Liaison Lewis extended his sincere condolences for the recent tragic accident on the NNSS.

NRFFO (*John Klenke*)

Liaison John Klenke noted that the Devils Hole Workshop will be held on April 26-28, 2023, at the Longstreet Inn in Amargosa Valley, NV. The workshop is hosted by the U.S. Geological Survey and Amargosa Conservancy and includes numerous topics with scientists presenting on the status of the Devils Hole pup fish and the area's hydrology, geology, and ecology. He will be giving an update on water level trends in southern Nye County during the workshop.

NDEP (*Christine Andres*)

Liaison Christine Andres introduced herself as the Bureau Chief for the Bureau of Federal Facilities (BFF). The Resource Conservation and Recovery Act (RCRA) permit was officially renewed this past Monday, which culminated a lengthy process that included NDEP BFF, NNSA/NFO, MSTs, and the EM Nevada Program. She provided updates on the four solid waste permits for the NNSS: one permit was renewed in January 2023, two permits are in the application stage with minor comments and changes needed, and the fourth permit will be reviewed near-term with all permits renewed by the Fall 2023. The NNSS E-Tunnel groundwater pollution discharge permit was issued in late February 2023.

Liaison Andres added that she and her staff attended the Waste Management Symposia (WMS) in Phoenix, AZ last month. In May 2023, she and Liaison Richard Arnold, CGTO, will be participating in a panel discussion on the productive working relationship in Nevada, along with Dr. David Bowman, NNSA/NFO, and DDFO Robert Boehlecke during the State and Tribal Government Working Group (STGWG) Meeting in Las Vegas, NV. Also in May 2023, she will be attending the National Governors Association Federal Facilities Task Force meeting at the

Hanford Site in Washington state. Liaison Andres concluded that BFF staff will be attending the EM Nevada Program's Waste Generator Workshop in May 2023 and the RadWaste Summit in June 2023, both in Las Vegas, NV. All these meetings have an exceptionally good exchange of information with a different focus.

NNSA/NFO Update (*Dr. David Bowman, NNSA/NFO*)

Dr. David Bowman, NNSA/NFO Manager, briefed on the accident on the NNSS that occurred on April 13, 2023. The accident involved a head-on collision between a vehicle driven by a military contractor and another vehicle with two MSTS miners who finished their shifts at the U1a Complex. The accident resulted in the deaths of the two miners. Dr. Bowman appreciated the response from those who have expressed condolences, thoughts, and prayers.

U.S. DOE Update (*Robert Boehlecke, DOE*)

DDFO Robert Boehlecke reported on the following DOE EM Nevada Program updates:

- The Underground Testing Area (UGTA) team has accomplished the last major step of its investigative phase of the Pahute Mesa groundwater region at the NNSS with the completion and acceptance of the external peer review report. UGTA received concurrence from NDEP on the peer review report that allows UGTA to progress into the model evaluation stage – a stage that involves new data collection and drilling along with updating the model of the groundwater region. These steps are outlined in the Federal Facility Agreement and Consent Order (FFACO) as a specific path to reach closure.
- The Industrial Sites team is preparing for the next phase of work at the Engine Maintenance, Assembly, and Disassembly (EMAD) and Test Cell C (TCC) facilities at the NNSS and has already worked on asbestos abatement. This comes after the Program successfully completed its top 2022 priority to begin demolition of the facilities. The Program is preparing to demolish four buildings at TCC in 2023, a mission goal that is included in EM's 2023 priorities focused on reducing the EM cleanup footprint.
- The EM Nevada Program this week hosted meetings of the LLW Disposal Facility Federal Review Group (LFRG) at the Molasky Corporate Center. A tour at the NNSS, including the Area 5 Radioactive Waste Management Complex (RWMC) is scheduled for tomorrow. The LFRG is an independent group sponsored by the DOE Office of EM that ensures through review that the DOE, including the NNSS LLW disposal facilities and tank closure at DOE sites, are protective of the public and the environment.
- The EM Nevada Program welcomed EM-3 to Las Vegas in early March 2023. Productive meetings were held with Ms. Nicole Nelson-Jean, who serves as the Associate Principal Deputy Assistant Secretary for the EM Complex. Ms. Nelson-Jean also participated in a tour of EMAD, TCC, and the Area 5 RWMC on the NNSS.
- During the first week of May 2023, the EM Nevada Program will be welcoming EM-2, Mr. Jeffrey Avery, to Las Vegas. Mr. Avery serves as the Principal Deputy Assistant Secretary for EM. He is expected along with EM Nevada representatives to be present at the STGWG meeting on May 2-4, 2023. Mr. Avery's visit also includes a tour of the NNSS.

- DDFO Boehlecke thanked NSSAB Vice-Chair Mark Hilton and Member Eddie Williams for representing the NSSAB during the EM Site-Specific Advisory Board National Chairs' Meeting in Washington, D.C.
- The EM Nevada Program recently participated in the WMS conference in late February into the first week of March 2023. DDFO Boehlecke thanked Member Gary Elgort for representing the NSSAB. The conference was filled with informative technical presentations, including several from Navarro staff that were very well-received. Navarro's strategic communications team will be working to update display banners for the booth and upgrades to the presentations for next year.
- On April 22, 2023, Navarro will be supporting a groundwater demonstration at an Earth Day event in Pahrump, NV.
- A staff member from Navarro's UGTA team will be presenting at the Devils Hole Workshop in Amargosa Valley, NV next week. There will be four NSSAB members represented at the workshop.
- In May 2023, the EM Nevada Program will host meetings and a tour of the NNSS for the Waste Generators Workshop for contractors and federal staff supporting waste generator sites with approved NNSS waste certification programs to share lessons learned.
- The Program recently received a request to help amplify an exhibit at the Atomic Museum. The request involved producing videos that complement the museum's content regarding the Project Rover and the Nuclear Engine for Rocket Vehicle Application or NERVA project. These two projects used the EMAD and TCC Facilities.

Atomic Museum Update (*Morgan Gifford, STEM Education Manager*)

Ms. Morgan Gifford provided an update on the Atomic Museum and its current and future planned Science, Technology, Engineering, and Math (STEM) and educational programming. The museum recently rebranded and shortened its public-facing name from the National Atomic Testing Museum to the Atomic Museum to attract a wider audience. The overall museum's goal is to provide educational resources to students and educators to encourage an interest in STEM fields and to provide exposure to career opportunities to support workforce development.

The Atomic Museum opened three exhibits in recent months. In August 2022, an exhibit was opened in partnership with DOE Office of EM. The exhibit offers a visual display of work at cleanup sites across the country impacted by nuclear weapons production and government-sponsored nuclear energy research. In addition to showcasing the cleanup of contaminated nuclear weapons, manufacturing and testing sites, the exhibit seeks to increase public awareness of EM's work with local communities to ensure the health and safety of the public workforce and environment. Since its opening, the museum has received great feedback from guests. In December 2022, the museum opened an exhibit that focuses on stockpile stewardship and how with the use of innovative and exciting science-based experiments, the United States can assure the safety and reliability of nuclear weapons without underground testing. In February 2023, the museum opened a 'Spy' exhibit that spotlights how the National Security Agency (NSA) gathering of telemetry intelligence, which is used to obtain data on the internal functioning of missiles and

space vehicles being tested by foreign governments, allowed the United States to keep pace with ever changing technology.

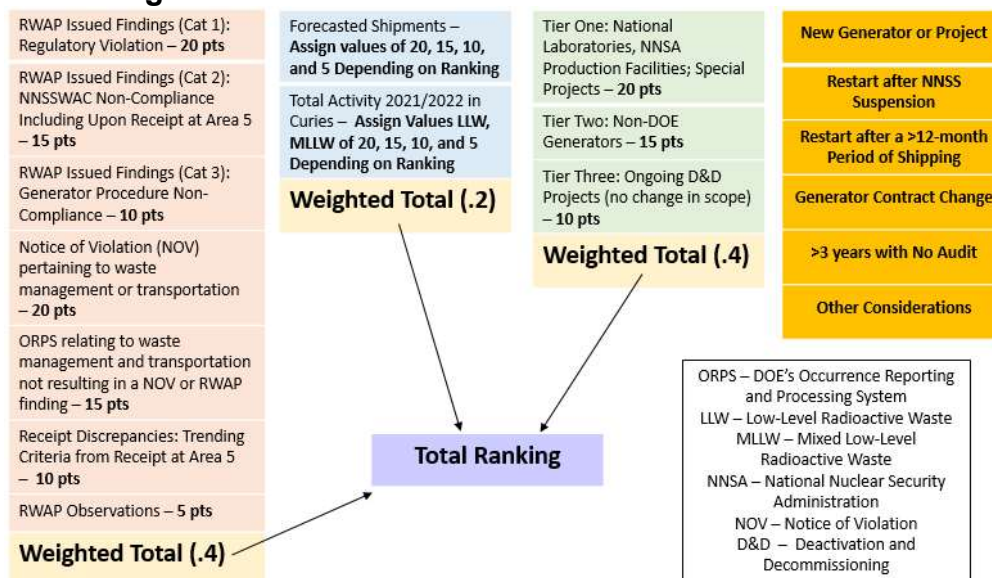
In 2022, the Atomic Museum received a \$2 million grant from the U.S. Department of Education that will be used to develop hands-on STEM exhibits that provide Nevada students, as well as local and visiting guests, with the background information on scientific principles that support work in nuclear science fields. The exhibits will cover topics, including atomic structure, fission and fusion, and radiation, and will be accessible to all museum guests. Currently in the planning and development, the museum anticipates that the exhibits will be open by the third quarter of 2024.

Ms. Gifford continued that the Atomic Museum has provided both STEM Saturdays and sponsored field trips to the museum with the support of the NNS and in partnership with the Clark County School District. STEM Saturday events allow families of students to come into the museum for a free hands-on demonstration of topics related to work currently conducted at the NNS by scientists and other site workers. The museum has also been able to offer sponsored tours with the support of the NNS. Educators can bring their students into the museum for a free docent-led tour of the museum, as well as demonstrations conducted by NNS employees.

Reevaluation of the Audit Determination Process (Work Plan Item #3) *(Marilew Bartling, Navarro)*

- **NSSAB – Work Plan Item #3**
 - From a community perspective, the NSSAB will provide a recommendation on the processes used by the EM Nevada Program to develop Radioactive Waste Acceptance Program (RWAP) Facility Evaluation (FE) schedules
 - Background: RWAP modified the risk-informed selection process for developing the FE schedule of waste generators starting in FY 2020 by adding additional attributes for consideration. After three years of data and lessons learned, the EM Nevada Program is reevaluating the risk attributes used in this process.
 - Up to two NSSAB members are invited to observe an RWAP FE and present their observations to the Full Board during the NSSAB Meeting on September 20, 2023
 - NSSAB recommendation is due in September 2023
- **Discussion Topics**
 - Defining FE Types
 - FE Schedule Enhancements Since FY 2020
 - Assessing and Rating Risk Attribute Data for Schedule Development
 - Evaluate Special Consideration for FEs
 - FY 2023 Ranking Table
 - Schedule Development and Control
 - Continuous Improvement
- **Defining FE Types**
 - Audits – evaluate waste generator program for evidence of compliant implementation with the NNS Waste Acceptance Criteria (WAC) five programmatic elements (radiological characterization, chemical characterization, traceability, packaging and transportation, and quality assurance)
 - Surveillances – evaluate specific programmatic and/or operational element implementation including one or more of the following:
 - Specific program element evaluations(s)
 - Corrective action evaluation(s), or

- Verifications
- Verifications – may include witnessing collection of analytical samples and splits or an on-site waste stream specific review
- **FE Schedule Enhancements Since FY 2020**
 - Program enhancements identified from lessons learned and the 2021 NDEP Settlement Agreement
 - Increased FEs by 10% over FY 2019 (27) versus FY 2022 (33)
 - Increased focused surveillances targeting complex waste streams to better inform participants in the Waste Acceptance Review Panel prior to approval
 - Documented agreed upon items into the 2022 NNSSWAC revision and updated RWAP team generator FE assessment tools – added waste stream ‘deep dive’ and Waste Certification Official checklists
- **Assessing and Rating Risk Attribute Data for Schedule Development**
 - Compile and assess waste generator’s compliance data from previous FYs based on RWAP findings and observations and governing regulator actions – 40% weighted factor
 - Compile and assess generator’s waste information for both shipment volumes and total waste activity (in curies) – 20% weighted factor
 - Sort by generator site type (e.g., production facility, national laboratory, EM restoration site) – 40% weighted factor
 - The total calculated number for each generator forms the baseline for risk ranking
- **Evaluate Special Consideration for FEs**
 - After the rankings are initially set based on the risk attributes, other considerations are reviewed:
 - New generators
 - Restart after an NNSS-issued Waste Certification Program suspension (generator self-suspension is determined on a case-by-case basis)
 - Three years since last audit for an active generator shipping waste
 - Change in generator site work scope or change in program prime contractor
 - Generator restarting after more than a 12-month gap in shipping waste to the NNSS
 - The final risk ranking is a management tool to best focus RWAP resources
- **FY 2023 Ranking Table**



- **Schedule Development and Control**
 - RWAP maintains flexibility in the schedule to adjust assessments if higher ranking generators need to be addressed or RWAP needs to accommodate issues that may arise
 - The RWAP Manager may downgrade or upgrade between an audit or surveillance or delay a FE based on other considerations in consultation with EM Nevada Program personnel
 - Schedule is updated at least quarterly to account for arising waste streams of special interest or other generator conditions
- **Continuous Improvement**
 - As the 2022 NNSWAC is implemented, RWAP works with EM Nevada Program, NDEP, and generators to continuously improve its FE Schedule evaluation process
 - Weighed factor adjustments and changes in criteria are continuously evaluated
 - RWAP encourages generator feedback and federal and regulator suggestions to enhance its FE Schedule process
 - Data compilation supported the process
- **Key Messages**
 - RWAP has formalized its risk-informed FE schedule generation process to minimize subjectivity
 - The FE Program made enhancements based on lessons learned and the NDEP Settlement Agreement
 - The FE Program allows sufficient flexibility and adjustment in FE scheduling to accommodate adverse changes in generator risk
 - RWAP strongly embraces continuous improvement and encourages feedback to improve its risk-informed process
- **Proposed RWAP Audits for NSSAB Observations**
 - To foster NSSAB understanding of waste generator missions and the depth of RWAP evaluations, EM Nevada is offering an opportunity for one NSSAB member to observe at each of the upcoming FEs:

Date	Generator	Location
August 7-10, 2023 (includes travel days)	Idaho National Laboratory (Advanced Mixed Waste Treatment Project – AMWTP)	Idaho Falls, ID
August 14-17, 2023 (includes travel days)	Perma-Fix (Diversified Scientific Services – DSSI)	Kingston, TN

- Selected modules assessed: quality assurance, radiological characterization, chemical characterization, traceability, and transportation
- Two-day surveillances with two auditors plus two days travel for out-of-state generators
- **NSSAB Path Forward – Work Plan Item #3**
 - From a community perspective, the NSSAB will provide a recommendation on the processes used by the EM Nevada Program to develop RWAP FE schedules
 - Up to one NSSAB member to observe at each of the upcoming FEs
 - NSSAB member(s) report their observations to the Full Board at the NSSAB Meeting on September 20, 2023
 - NSSAB recommendation is due in September 2023

In response to Board questions, the following clarifications were provided:

- The RWAP team does not conduct unannounced FEs primarily because most generator sites are on controlled federal facilities and require an onsite representative available to sponsor any visits. A secondary reason is that the RWAP team potentially could show up unannounced and the generator site may not be packaging waste during that time. However, the RWAP team has provided training for federal employees with an oversight role to conduct verifications at their respective sites that can be unannounced. This was an improvement put in place in response to a past NSSAB recommendation.
- RWAP has criteria in place to conduct verification on 10% (up recently from 5%) of the containers included in a waste profile (could be one container or thousands of containers). During an FE, the RWAP team can request to verify any container that is destined for the NNSS. The RWAP team may not be able to view the contents if the container is sealed, although the generators take photos that are shared with RWAP that provides assurance that the waste profile paperwork is accurate.
- One reason that a waste generator does not ship on a regular basis is they have their own onsite disposal facility and ship to the NNSS in cases where there is a security reason. There are several sites that generate low volumes of waste that they temporarily store onsite and ship to the NNSS for permanent disposal once a year or every other year. Waste generators perform annual independent assessments on their waste certification programs that are reviewed by RWAP. The RWAP team monitors DOE's Occurrence and Reporting System (ORPS) for any corrective actions as it relates to waste generators. Waste generators that do not ship regularly are required to provide the RWAP with nine months prior notice to respond to any issues before the generator is approved to ship waste to the NNSS.
- The paper that Navarro presented at the WMS analyzed the key areas most of the issues the RWAP team find at the generator sites during an FE, whether it was radiological characterization, chemical characterization, transportation, quality assurance, or traceability. Issues related to characterization are the most challenging to resolve.
- After a Finding is issued by RWAP, the generator is required to submit a corrective action plan (CAP) that details their response to the Finding. The CAP includes whether the generator needs to conduct an extent of condition to determine whether the issue goes beyond what was identified in the FE, defines the actions that the generator is going to put in place to correct the Finding, and provides a schedule for implementation of the corrective actions. Once notified that the CAP is complete, RWAP will either review the information provided by the generator or will recommend to the EM Nevada Program that a site visit is conducted to verify the implementation of the corrective actions. RWAP also conducts follow-ups of corrective actions at subsequent FEs of the generator.

The Board thanked Marilew for her presentation and for answering questions. By secret ballot, Member John Cole was selected to observe the FE in Idaho Falls, ID, and Member Joycelyn Austin-Mabe was selected to observe the FE in Kingston, TN. Member Eddie Williams will be the alternate for both FEs. The NSSAB Members Cole and Austin-Mabe are tasked with accompanying the RWAP Team to observe the FE, taking notes, and providing a verbal report during the NSSAB Full Board Meeting on September 20, 2023, in support of the Board providing a recommendation(s) on work plan item #3. The NSSAB Office will assist with travel arrangements.

Other NSSAB Business (Anthony Graham, Chair)

Update on EM Site-Specific Advisory Board (SSAB) National Chairs' Meeting

In March 2023, Vice-Chair Mark Hilton and Member Eddie Williams represented the NSSAB during the EM SSAB National Chairs' Meeting held in Washington, D.C. Vice-Chair Hilton presented the NSSAB's round robin to William "Ike" White, Senior Advisor (EM-1), and Jeffrey Avery, Acting Principal Deputy Assistant Secretary (EM-2), highlighting accomplishments and key topics of importance to the NSSAB. Vice-Chair Hilton and Member Williams provided a PowerPoint presentation of photos to recap the meeting for the Board. Meeting agenda, presentations, and the YouTube recording of the meeting can be accessed [here](#).

Vice-Chair Hilton brought forward a draft recommendation that was developed during the EM SSAB National Chairs' Meeting entitled "*Implementation of EM SSAB Chairs' Recommendations.*" A copy of the draft recommendation was provided in advance of the meeting for the NSSAB's review and consideration. After Board discussion, Member Williams made a motion to approve the EM SSAB draft recommendation. The motion was seconded and passed unanimously. Chair Graham will be a signatory along with any of the other seven EM SSAB Boards that approve the draft recommendation.

NSSAB Update on Waste Management Symposia

Member Gary Elgort shared items of interest from his attendance at the Waste Management Symposia held on February 27 – March 3, 2023, in Phoenix, AZ. His update included an informative PowerPoint presentation with photos that he had taken during the conference. Member Elgort thanked the EM Nevada Program for the opportunity to attend the conference.

NSSAB Update on LLW Stakeholders Forum

Member DeWitt shared items of interest from his attendance at the LLW Stakeholders Forum held on February 8, 2023, in Pahrump, NV.

Revegetation of EM Sites (Work Plan Item #5) (Tiffany Gamero, DOE)

- **NSSAB – Work Plan Item #5**
 - From a community perspective, the NSSAB will provide a recommendation on improvements or enhancements to revegetation of EM sites
 - NSSAB recommendation is due in July 2023
- **Discussion Topics**
 - Importance of vegetation on closed landfill covers
 - History of revegetation of EM sites
 - Future timeline of required revegetation efforts
- **Definitions**
 - Evapotranspiration – the process by which water is transferred from the land to the atmosphere by evaporation from the soil and other surfaces and by transpiration from plants
 - Broadcast seeding – method of seeding that involves scattering seed, by hand or mechanically, over a relatively large area
 - Transplant – a growing plant that is uprooted and replanted in another location

- Outplant – a growing plant that is reared in a greenhouse and replanted outdoors
- **Evapotranspiration Covers**
 - A stable plant community:
 - Prevents precipitation from reaching buried waste, which can carry contamination out of the landfill toward groundwater by returning moisture to the atmosphere by evapotranspiration
 - Reduces water and wind erosion
 - Restores the disposal unit to its surrounding environment
- **EM Sites Required to be Vegetated**
 - Area 3 Radioactive Waste Management Site (RWMS): U-3ax/bl disposal unit
 - Area 5 Radioactive Waste Management Complex (RWMC) closed landfill cells:
 - Closure Covers: Cells 10, 12, 13, 14, 15, 17, 18, 19, 20, and 21
 - 92-Acre Area: North-North, South-North, West, and South Covers
- **U-3ax/bl Disposal Unit, Area 3**
 - Closed in 2000
 - Cover vegetated with a mixture of shallow-rooting native plants
 - Broadcast seeding
 - Straw mulch
 - Supplemental irrigation
 - Chicken wire mesh fences
- **Area 5 Closure Covers: History**
 - Cell 18
 - Seeded in 2020
 - Outplants added in 2021
 - Cells 10, 12, and 17 and Cells 13, 14, and 15 Closure Covers
 - Seeded in 2021 (outplants determined not to be needed to supplement seeds)
 - Cell 19 and 20
 - Seeded in 2022
 - Outplants added in 2023
 - Cell 21
 - Seeded in 2023; potential outplants in 2024
- **Area 5 Closure Covers: Path Forward**
 - Cells 8 and 16
 - To be seeded in 2024
 - Potential outplants in 2025
- **92-Acre Area, Area 5: History**
 - Closed and all four covers seeded in 2011
 - Plants initially sprouted, but high plant mortality rates were observed by May 2013
 - Test plots on North-North Cover in October 2013; viable community was not established
 - Test plots on South-North Cover in October 2014; viable community was not established
 - Tribal Revegetation Project on South-North Cover from 2016 through 2021
- **Tribal Revegetation Project**
 - Test plots were established on the South-North Cover using various combinations of revegetation and outplant treatments during two planting seasons (Fall 2017 and Spring 2018)
 - Monitoring of the test plots was conducted from 2018-2020 by Tribal members and the Desert Research Institute

- Test plots were routinely irrigated through Fall 2020
- A final project report, detailing the observations and recommendations, was delivered to the EM Nevada Program in March 2021
- **92-Acre Area, Area 5: Path Forward**
 - Revegetation of the covers will incorporate recommendations from the Tribal Revegetation Project and lessons learned from revegetation projects to date
 - North-North Cover – seeded in 2023; potential outplants in 2024
 - South Cover – to be seeded in 2024; potential outplants in 2025
 - West and South-North Covers – seeded in 2025; potential outplants in 2026
- **Key Messages**
 - Revegetation is a vital component of closure of EM landfill units
 - As remaining cells at Area 5 RWMC are closed in the future, they will also be revegetated
 - Lessons learned, both ongoing and those compiled since revegetation began, will guide future efforts
- **NSSAB Path Forward – Work Plan Item #5**
 - From a community perspective, the NSSAB will provide a recommendation on improvements or enhancements to revegetation of EM sites
 - NSSAB recommendation is due in July 2023

In response to Board questions, the following clarifications were provided:

- Trees are not planted in revegetated areas as the goal is to replicate the native plants community that is growing in the surrounding area. Also, do not want any deep-rooting botanicals on top of the closure covers.
- Examples of the more common plants that grow naturally in the Area 5 RWMC are creosote, desert marigold, globemallow, and 4-wing saltbush.
- Approximately fifty-five acres of the 92-Acre Area requires revegetation of its closure covers.
- Revegetation of the four closure covers on the 92-Acre Area will be staggered due to the amount of water needed for irrigation.
- MSTs biologists determined that successful revegetation occurred on some of the closure covers when the planting was conducted during the right time of the year.
- There is funding allocated for the revegetation of the closure covers, but the work is staggered due to limited resources for personnel and water.
- The roads in the 92-Acre Area will continue to be used for long-term monitoring of the closed waste cells after revegetation is completed. Under the RCRA permit, a hazardous waste landfill must be monitored for 30 years after the cell has been closed, capped, and revegetated.
- Outplants have not been used to date for revegetation on the 92-Acre Area except for in the Tribal Revegetation test plots.
- MSTs biologists calculate the amount of precipitation that occurs in a good growing season on the NNESS then irrigation is applied to replicate.

- Once the closure cover has been seeded, invasive plant species, including grasses, do grow on the cover. As the preferred perennial species grow, the invasive species in most cases will be outcompeted.
- There are water wells on the NNSS used for irrigation. Water is pumped from these wells to a fill stand at the Area 5 RWMC where the trucks are then filled for the irrigation lines.
- Gray water refers to water that already has been used domestically, commercially, and industrially that does not require significant physical or chemical processes to make potable again. Black water contains human waste and is unsafe. Wastewater refers to water that is no longer suitable for another use and must be treated or disposed.

Chair Graham and Vice-Chair Hilton led Board discussion on work plan item #5 with potential recommendations provided by members during the meeting on improvements or enhancements to revegetation of EM sites, as follows:

- Potential recommendation #1: Investigate using transplants of desert plant species from Bureau of Land Management lands to revegetate EM sites.

Member Elgort made a motion that the potential recommendation #1 above be approved for work plan item #5. Member John Cole seconded the motion. The motion passed unanimously.

- Potential recommendation #2: Investigate different water sources for irrigation such as gray reclaimed water to revegetate EM sites.

Member Williams made a motion that the potential recommendation #2 above be approved for work plan item #5. Member William Dolan seconded the motion. After additional Board dialogue, the NSSAB requested additional information on this item, and Member Dolan withdrew his second. Member Favil West made a motion to table. Member DeWitt seconded the motion. The motion to table passed with a majority. Potential recommendation #2 will be reconsidered during the July 19th Full Board Meeting after receiving additional information from the EM Nevada Program.

The Board thanked Tiffany for her presentation and for answering questions. The NSSAB Office will draft the NSSAB recommendation letter for recommendation #1 that passed and submit it to the EM Nevada Program for its consideration and response.

Meeting Wrap-Up and Adjournment

Upcoming calendar of events:

- Devils Hole Workshop – Amargosa Valley, NV – April 26-28, 2023 (Members Blandi, Cole, Elgort, and Anderson to attend)
- EM-2 to meet with NSSAB Leadership – Las Vegas, NV – May 2, 2023 (Chair Graham and Vice-Chair Hilton to attend)
- Waste Generator Workshop – Las Vegas, NV – May 8-10, 2023
- LLW Stakeholders Forum – Las Vegas, NV – May 16, 2023 (Member Blandi to attend)
- NSSAB Tour of EMAD and TCC on the NNSS – May 17, 2023 (NSSAB Members, Liaisons, and Guests to attend)

- RadWaste Summit – Las Vegas, NV – June 6-8, 2023 (Vice-Chair Hilton and Member Williams to attend)
- NSSAB Intergovernmental Liaisons meeting – Molasky Corporate Center, Las Vegas, NV at 3 p.m.– July 19, 2023 (Chair Graham and Vice-Chair Hilton to attend)
- NSSAB Full Board meeting – Molasky Corporate Center, Las Vegas, NV at 4 p.m. – July 19, 2023

For questions on the calendar of events, please contact the NSSAB Office at 702-523-0894.

Member DeWitt made a motion to adjourn the meeting. The motion was seconded and passed unanimously. The meeting was adjourned at 8:44 p.m.